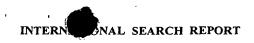
INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference								
P02EC005/PCT	FOR FURTHER ACTION	see Notification of (Form PCT/ISA/220	Transmittal of International Search Report 1) as well as, where applicable, item 5 below.					
International application No.	International filing date	(day/month/year)	(Earliest) Priority Date (day/month/year)					
PCT/KR02/02478	30 DECEMBER 2002	2 (30.12.2002)	16 OCTOBER 2002 (16.10.2002)					
Applicant								
ELECTRONICS AND TELECOMMU	NICATIONS RESEAR	CH INSTITUTE e	t al					
This International search report has been prepared to Article 18. A copy is being transmitted to the	ared by this International are International Bureau.	Searching Authority a	and is transmitted to the applicant according					
This international search report consists of a to								
Basis of the report a. With regard to the language, the interlanguage in which it was filed, unless	rnational search was carr	ried out on the basis of	f the international application in the					
the international search was carried Authority (Rule 23.1(b)).	ed out on the basis of a tr	anslation of the intern	ational application furnished to this					
 b. With regard to any nucleotide and/o was carried out on the basis of the se 	r amino acid sequence di quence listing:	sclosed in the internat	ional application, the international search					
contained in the international ap	plication in written form.							
filed together with the internatio	nal application in comput	er readable form.						
furnished subsequently to this A	uthority in written form.							
furnished subsequently to this Authority in computer readable form.								
the statement that the subsequent international application as filed		ence listing does not p	go beyond the disclosure in the					
the statement that the information furnished.	n recorded in computer re	adable form is identica	al to the written sequence listing has been					
2. Certain claims were found unse	archable (See Box I).							
3. Unity of invention is lacking (Se	•		,					
4. With regard to the title,								
X the text is approved as submitted	by the applicant		,					
the text has been established by the	• • •	allaa.	1					
die text has been established by t	ms Audionty to read as it	ollows:						
5. With regard to the abstract,			·					
the text is approved as submitted by								
the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant								
within one month from the date of	mailing of this internation	nal search report, subr	nit comments to this Authority.					
 The figure of the drawing to be publish 	ed with the abstract is Fig	gure No. 3						
X as suggested by the applicant.			None of the figures.					
because the applicant failed to sug	gest a figure.							
because this figure better character	· -		}					
<u> </u>			1					



International application No. PCT/KR02/02478

CLASSIFICATION OF SUBJECT MATTER

According to International Patent Classification (IPC) or to both national classification and IPC

FIELDS SEARCHED

IPC7 H01Q 21/00

Minimum documentation searched (classification system followed by classification symbols)

IPC: H01Q3/30, H04Q7/20, H04B1/38, H04B15/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Korean Patents and Applications for Inventions since 1975

Korean Utility Models and Applications for Utility Models since 1975

Electronic data base consulted during the intertnational search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Α	KR 02-18328A(LG Information & Communications LTD) 08 Mar.2002 abstract, claim1	1
Α	US 6,292,135 B1(Nippon Telegraph and Telephone Corporation) 26 Nov.2001 abstract	1
Α	US 6,185,440B1(ArrayComm Inc) 06Feb.2001 abstract, column10 line63- column12 line55	1
Α	US 6,236,839B1(UTStarcom, Inc) 22May.2001 abstract	1 .
Α	JP2001177457A(Nippon Telegraph and Telephone Corporation) 29 Oct.2001 abstract	1
Α	JP2001201526A(MITSUBISHI ELECTRIC CORP) 2 7Jul.2001 abstract	1

	Further documents are listed in the continuation of Box C.
*	Special entenories of cited documents:

See patent family annex.

- Special categories of cited documents:
- document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier application or patent but published on or after the international filing date
- document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)
- document referring to an oral disclosure, use, exhibition or other
- document published prior to the international filing date but later than the priority date claimed
- later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- "&" document member of the same patent family

Date of the actual completion of the international search

23 JUNE 2003 (23.06.2003)

Date of mailing of the international search report

24 JUNE 2003 (24.06.2003)

Name and mailing address of the ISA/KR



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Facsimile No. 82-42-472-7140

Authorized officer

BAK, Jeong Sik

Telephone No. 82-42-481-5713





international application No. PCT/KR02/02478

Information on patent family members

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
KR 02-18328A	08 Mar 2002	None	
US 6,292,135B1	26 Nov.2001	JP2001044903A EP1043801A2	16 Feb 2001 11 Oct 2000
US 6,185,440B1	06 Feb.2001	None	
US 6,236,839B1	22 May.2001	None	
JP2001177457A	29 Oct,2001	None	
JP2001201526A	27 Jul.2001	None	